

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-30. (cancelled)

31. (Currently amended) Plant cells, comprising heterologous DNA encoding an EG307 polypeptide, ~~wherein said polypeptide is capable of increasing the yield of a plant,~~ wherein said polypeptide is selected from the group consisting of:

a) a polypeptide encoded by a polynucleotide selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO: 91, SEQ ID NO:33, SEQ ID NO:34, and SEQ ID NO:35 ;

b) a polypeptide encoded by a polynucleotide having at least ~~75~~ 95% sequence identity to a polynucleotide in a), wherein the presence of said polynucleotide is a marker of increased yield in a plant of the genus Oryza or Zea;

c) a polypeptide comprising SEQ ID NO:6 or SEQ ID NO:36; and

d) a polypeptide having at least ~~75~~ 95% sequence identity to a polypeptide of c), wherein the presence of a polynucleotide encoding a polypeptide of (d) is a marker of increased yield in a plant of the genus Oryza or Zea.

32. (original) A propagation material of a transgenic plant comprising the transgenic plant cell according to claim 31.

33. (Currently amended) A transgenic plant containing heterologous DNA which encodes an EG307 polypeptide that is expressed in plant tissue, ~~wherein said polypeptide increases the yield of the plant,~~ and said polypeptide is selected from the group consisting of:

a) a polypeptide encoded by a polynucleotide selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO: 91, SEQ ID NO:33, SEQ ID NO:34, and SEQ ID NO:35;

b) a polypeptide encoded by a polynucleotide having at least ~~75~~ 95% sequence identity to a polynucleotide in a), wherein the presence of said polynucleotide is a

marker of increased yield in a plant of the genus Oryza or Zea;

- c) a polypeptide comprising SEQ ID NO:6 or SEQ ID NO:36; and
- d) a polypeptide having at least ~~75~~ 95% sequence identity to a polypeptide of c) ~~and which confers substantially the same yield as the polypeptide of e), wherein the presence of a polynucleotide encoding a polypeptide of (d) is a marker of increased yield in a plant of the genus Oryza or Zea.~~

34. (Currently amended) An isolated polynucleotide which includes a promoter operably linked to a polynucleotide that encodes an EG307 gene in plant tissue, ~~wherein said polynucleotide is capable of increasing the yield of a plant,~~ said polynucleotide selected from the group consisting of:

- a) a polynucleotide selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO: 91, SEQ ID NO:33, SEQ ID NO:34, and SEQ ID NO:35;
- b) a polynucleotide having at least ~~75~~ 95% sequence identity to a polynucleotide of a), wherein the presence of said polynucleotide is a marker of increased yield in a plant of the genus Oryza or Zea;
- c) a polynucleotide encoding a polypeptide comprising SEQ ID NO: 6 or SEQ ID NO:36; and
- d) a polynucleotide encoding a polypeptide ~~comprising a protein~~ having at least ~~75~~ 95% sequence identity to SEQ ID NO: 6 or SEQ ID NO:36, ~~and which confers substantially the same yield as the polypeptide of e), wherein the presence of a polynucleotide encoding a polypeptide of (d) is a marker of increased yield in a plant of the genus Oryza or Zea.~~

35. (original) The isolated polynucleotide of Claim 34, wherein said polynucleotide is a recombinant polynucleotide.

36. (Currently amended) The isolated polynucleotide of claim 34, wherein the promoter is the promoter native to an EG307 gene.

37-44. (cancelled).

45. (Currently amended) A transfected host cell comprising a host cell transfected with a construct comprising a promoter, enhancer or intron polynucleotide from an

evolutionarily significant EG307 polynucleotide or any combination thereof, operably linked to a polynucleotide encoding a reporter protein, ~~wherein said EG307 polynucleotide is capable of increasing the yield of a plant,~~ wherein said EG307 polynucleotide is capable of increasing the yield of a plant, wherein said EG307 polynucleotide is selected from the group consisting of:

- a) a polynucleotide selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO: 91, SEQ ID NO:33, SEQ ID NO:34, and SEQ ID NO:35;
- b) a polynucleotide having at least 75 95% sequence identity to a polynucleotide of a), wherein the presence of said polynucleotide is a marker of increased yield in a plant of the genus *Oryza* or *Zea*;
- c) a polynucleotide encoding a polypeptide comprising SEQ ID NO: 6 or SEQ ID NO:36; and
- d) a polynucleotide encoding a polypeptide ~~comprising a protein~~ having at least 75 95% sequence identity to SEQ ID NO: 6 or SEQ ID NO:36, ~~and which confers substantially the same yield as the polypeptide of e),~~ wherein the presence of a polynucleotide encoding a polypeptide of (d) is a marker of increased yield in a plant of the genus *Oryza* or *Zea*.

46. (Currently amended) A method of identifying an agent which may modulate yield, said method comprising contacting at least one candidate agent with a plant or cell comprising an EG307 gene, wherein the agent is identified by its ability to modulate yield, ~~wherein said EG307 gene is capable of increasing the yield of a plant,~~ and wherein said EG307 gene comprises a polynucleotide selected from the group consisting of:

- a) a polynucleotide selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO: 91, SEQ ID NO:33, SEQ ID NO:34, and SEQ ID NO:35;
- b) a polynucleotide having at least 75 95% sequence identity to a polynucleotide of a), wherein the presence of said polynucleotide is a marker of increased yield in a plant of the genus *Oryza* or *Zea*;
- c) a polynucleotide encoding a polypeptide comprising SEQ ID NO: 6 or SEQ ID NO:36; and
- d) a polynucleotide encoding a polypeptide ~~comprising a protein~~ having at least 75 95% sequence identity to SEQ ID NO: 6 or SEQ ID NO:36, ~~and which confers substantially the same yield as the polypeptide of e),~~ wherein the presence of a polynucleotide encoding a polypeptide of (d) is a marker of increased yield in a plant of the genus *Oryza* or *Zea*.

47. (Previously presented) The method of Claim 46, wherein the plant or cell is transfected with a polynucleotide of a), b), c), or d).

48. (cancelled)

49. (original) The method of claim 46, wherein said identified agent modulates yield by modulating a function of the polynucleotide encoding the polypeptide.

50. (original) The method of claim 46, wherein said identified agent modulates yield by modulating a function of the polypeptide.

51. (cancelled)

52. (cancelled)

53. (Currently amended) A method of producing an EG307 polypeptide comprising:  
a) providing a cell transfected with a polynucleotide encoding an EG307 polypeptide positioned for expression in the cell;

b) culturing the transfected cell under conditions for expressing the polynucleotide; and

c) isolating the EG307 polypeptide, wherein said polypeptide is selected from the group consisting of:

i) a polypeptide encoded by a polynucleotide selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO: 91, SEQ ID NO:33, SEQ ID NO:34, and SEQ ID NO:35;

ii) a polypeptide encoded by a polynucleotide having at least ~~75~~ 95% sequence identity to a polynucleotide in i), wherein the presence of said polynucleotide is a marker of increased yield in a plant of the genus Oryza or Zea;

iii) a polypeptide comprising SEQ ID NO:6 or SEQ ID NO:36; and

iv) a polypeptide having at least ~~75~~ 95% sequence identity to a polypeptide of iii), wherein the presence of a polynucleotide encoding a polypeptide of (d) is a marker of increased yield in a plant of the genus Oryza or Zea.

54-79. (cancelled)